UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Forest Insect & Disease Management
PO Box 5895, Asheville, NC 28803

77-1-12

REPLY TO: 5200

May 10, 1977

SUBJECT: Biological Evaluation - Pales Weevil, Wythe Ranger District

TO: Michael J. Penfold, Forest Supervisor, Jefferson National Forest

Va.

At the request of Bob Colona, Harold Flake, Field Representative, and Larry Barber, Entomologist, examined a white pine plantation on the Wythe Ranger District. The purpose of the service trip on May 5 was to examine the plantation for pales weevils and damage that associated with this insect. We were accompanied by Bob Colona and Don Spiller. Pales weevils (Hylobius pales (Hbst.)) were found and significant damage is occurring on the planted seedlings. Without suppressive action the plantation in all probability will be a failure.

The examination consisted of "setting" traps to determine if the weevil was present and pulling a number of seedlings to determine if they had been fed on by the weevil. The 70 acre planting site consisted of two areas located about nine miles southwest of Pulaski, Virginia. Both areas were logged last summer with the last logging activity occurring in August or September, 1976. The stand was stocked with 200 white pines, Pinus strobus L. on a 15' by 15' spacing per acre. The seedlings were purchased from the Virginia Division of Forestry.

On May 4, prior to the evaluation, personnel from the Wythe Ranger District placed approximately 50 freshly cut weevil traps in the newly planted area. The traps consisted of 3/4" thick cross sections 6" in diameter from a freshly cut pine tree. If pales weevils are in the area they are attracted to the disks. The traps were used because pales weevils generally feed at night and burrow around the base of seedlings in the forest litter during the day making their detection difficult.

The detection survey consisted of observing each trap to determine the presence of weevils in the area. About 50 percent of the traps had one or more weevils under them. In all the traps nearly 50 weevils were collected. Weather conditions during the trapping period were not ideal, i.e., cool temperature with rain. Under these conditions the number of trapped weevils indicates a high population in the area. All of the weevils collected were taken to the Asheville Field Office and identified as pales weevils except one that was identified as Pissodes sp. probably the white pine weevil, P. strobi (Peck).

In two areas 25 planted seedlings were pulled at random to determine presence or absence of weevil feeding. Observations showed weevil damage at 36 and 29 percent on the planted seedlings. Weevil feeding

can be expected to continue to be heavy through May with continuad lighter feeding throughout the summer and with heavier feeding again in late summer and fall unless chemical sprays are used.

We recommend each seedling be sprayed immediately with a foliar spray containing 2% Dursban 4E per label directions (label attached). Prepare the spray by thoroughly mixing 5 1/2 fluid ounces of Dursban 4E per gallon of water and apply with a hand sprayer to each seedling. Treat each seedling with enough spray to thoroughly wet the foliage and stems to the point of run off using no more than six gallons of spray per acre.

Without spraying most of the trees will probably be killed and the few remaining trees will yield an understocked stand. Forest and District personnel indicate the present planting investment on the 70 acre site is $11,200 while the cost to spray all seedlings is estimated at $1,485. The benefit cost rate is therefore 1:7.5. The benefit cost is based on the following investment estimates of site preparation at $60/acre, seedling purchase and planting at $50/acre, and RO, SO, and District GA at $50/acre, for a total investment of $11,200. Suppression costs are estimated at $8/acre manpower, pesticide purchase $525, travel $100, and GA of $300, for a total cost of $1,485. If spraying isn't done, planting and site preparation costs will have to be incurred again next spring.

If you wish to suppress the pest, please submit form 5200-10, Project Proposal, to Atlanta. I understand funds are available in the Area's Suppression Contingent. This letter will serve as the bioevaluation and cost benefit analysis.

In the future where logging or site disturbance occurs in the months of July through February and the area is to be planted the following spring (February, March), use seedlings treated with either Imidan, Dursban, or Furadan per label directions. In areas where logging occurs after July but planting is not planned for at least a year, treated seedlings are probably not necessary. Seedlings can be treated by dipping in the field.

HAROLD W. FLAKE
Field Representative

Enclosure

cc: Wythe RD
Barber
Toko

HWFlake/fc